ABSTRACT OF THE DISCLOSURE

The present invention provides compositions and methods relating to avian leptin receptor binding domains. The present invention demonstrates that these compositions are useful for detecting the presence of leptin in a sample and distinguishing free leptin from bound leptin in multiple species. Methods and kits are presented for determining free leptin in a sample from an individual by assaying a sample for the binding of leptin to an avian leptin receptor binding domain, and detecting the bound leptin by using a labeled anti-leptin antibody.